Physica Status Solidi (B) Basic Research 1985 vol.127 N2, pages 679-688

KINETIC PROPERTIES OF THE TWO-LEVEL SYSTEMS IN GLASSES WITH ACCOUNT OF TUNNELING.

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Abstract

The kinetics of two-level systems in glasses at low temperatures is studied with account of a distribution of their tunneling parameter values. Integral equations describing the process of spectral diffusion in a glass are obtained by the methods of the continuous time random walk theory. The long-time asymptotics of the process is a superposition of individual and 'collective' relaxations, the latter one is characterized by the single relaxation rate. Manifestation of the results in echo saturation recovery experiments in glasses is discussed.